

S/N 09/302,154
Docket: YO999-214

(1) presenting a collection of training data records comprising examples of input values that are available to the model together with the corresponding desired output value(s) that the model is intended to predict; and

(2) generating on the basis of the training data a plurality of segment models, that together comprise an overall model, wherein each segment model is associated with a specific segment of the training data, said generating comprising performing optimization comprising:

- a) generating alternate training data segments and associated segment models;
- b) evaluating at least one generated segment to determine whether it satisfies at least one statistical constraint; and
- c) selecting a final plurality of segment models and associated segments from among the alternates evaluated that have satisfactory evaluations.

2. (Amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for constructing segmentation-based models that satisfy constraints on the statistical properties of the segments, the method comprising:

(1) presenting a collection of training data records comprising examples of input values that are available to the model together with the corresponding output value(s) that the model is intended to predict; and

(2) generating on the basis of the training data a plurality of segment models, that together comprise an overall model, wherein each segment model is associated with a

S/N 09/302,154
Docket: YO999-214

specific segment of the training data, said generating comprising performing optimization comprising:

- a) generating alternate training data segments and associated segment models using statistical constraints to guide the construction of the data segments in a closed-loop fashion so as to ensure that the resulting data segments satisfy the statistical constraints; and
- b) selecting a final plurality of segment models and associated segments from among the alternates generated.

3. (Amended) A program storage device readable by a machine, tangibly embodying a program instructions executable by the machine to perform a method for constructing segmentation-based models that satisfy constraints on the statistical properties of the segments, the method comprising:

(1) presenting a collection of training data records comprising examples of input values that are available to the model together with the corresponding desired output value(s) that the model is intended to predict; and

(2) generating on the basis of the training data a plurality of segment models, that together comprise an overall model, wherein each segment model is associated with a specific segment of the training data, said generating comprising:

- a) generating alternate pluralities of data segments and associated segment models;
- b) adjusting the alternate pluralities so that the resulting data segments satisfy the statistical constraints.

S/N 09/302,154
Docket: YO999-214

4. (Amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for constructing segmentation-based models of insurance risks, the method comprising:

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(1) presenting a collection of training data comprising examples of historical policy and claims data; and

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(2) generating on the basis of the training data a plurality of segment models, that together comprise an overall model, wherein each segment model is associated with a specific segment of the training data, said generating comprising performing optimization comprising:

- a) generating alternate training data segments and associated segment models;
- b) evaluating the generated segment models using numerical criteria derived from statistical models used by actuaries to model insurance risks, and
- c) selecting a final plurality of segment models and associated segments from among the alternates generated so as to optimize aggregate numerical criteria for the plurality.

Please add the following new claim: